



Trumpet Vine

*Knowledge for the Community from Loudoun County Extension
Master Gardeners*

Winter 2022-23

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LOUDOUN COUNTY EXTENSION MASTER GARDENER LECTURE SERIES

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Virtual Lectures:

January 12, 7:00 - 8:00pm
Hard to See, But Spotted
Lanternfly is Still Here by Beth
Sastre, Commercial
Horticulturist, VCE

February 2, 7:00-8:00pm
Native Cultivars vs Straight
Species: Which to Choose by
Connie Schmotzer, Penn State
Extension

February 23, 7:00-8:00pm
Becoming A Good Houseplant
Parent by Pamela McGraw,
Master Gardener

March 2, 7:00-8:00pm
Snakes Alive!: An Introduction
to the Snakes of Loudoun
County by Jenny Erickson,
Loudoun Wildlife Conservancy

Check the event calendar on
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Winter Respite

Winter offers a respite from the demands of the garden. No weeding that must be done, no pressure of planting before the higher temperatures arrive in the garden, no watering, no disease or insect infestations. The pressure is off.

Winter is a great time to observe the “bones” of your garden design. Is anything “off” or in need of change? Without foliage, you can observe the structure of your trees and shrubs. Are there crossing or rubbing branches? Broken branches? Crowding? Branches growing inward instead of out? Are large trees encroaching on the sides or the roof of your house? Winter is the best time for pruning. Call in a professional for anything you can’t do with hand tools and your feet on the ground!

This is the time to start native perennial seeds outside! Winter is not too late. (See the Fall issue for more information.) Start planning your vegetables and annual ornamentals for next year. Research your wish list plants and determine right plant, right place for your yard. Sketch out new garden projects and the research the best sources for seeds, plants, and equipment.

But primarily, this is the time to recharge. The pressure is off. Kick back and relax. Follow your interests not your “to do” list. If you need a vacation from gardening, take it!

Have a rejuvenating winter!

What I Like About Being a Master Gardener

Since moving to Virginia ten years ago, I've been wanting to become a Master Gardener. When the Covid pandemic hit, what was I to do? Aha! NOW I would have the time to study to be a master gardener! I've always been interested in plants and had some sort of garden growing around me. This seemed like a good idea!

During my studies last year, I was amazed by the expertise in a myriad of horticulture subjects our presenters willingly shared. I came away with the knowledge that there is a snowball's chance that I'd ever learn it all. BUT I will know where to find the answers to the questions I can't even think of at this time. This I find extremely exciting and exhilarating.

And there was so much more to learn besides what was presented in those master gardener classes. I was introduced to the workings of the master gardener organization, local and statewide. Various teams welcomed me as a willing volunteer.

I dove into the garden clinics since one was so close to my home; it was easy to get there and still do my market shopping! There, as the world opened up from the pandemic, I found the public hungry for answers to puzzling situations around their homes. Coming up with a plan for them was most satisfying.

In the training team, I felt as though my insight as a recent grad was given gracious consideration. Being a part of the planning for each new class has been enlightening. This is a hard-working group of people. They've got their heads around so many issues; it makes my own head spin. The presenters are extremely knowledgeable in their individual fields. It's awe inspiring,



Demo Garden, Photo: Rachel Healy.

In the past, I've found that symposiums are a perfect environment to soak up new ideas. I knew this was another team I just had to join.

And being a tree-hugger of long standing, being on the tree steward (and water steward) team was a no-brainer. The excursions for pond assessments and stream assessments were educational to say the least. Again, meeting the public where a need was the greatest gave me great satisfaction. I

look forward to next year's advanced training for tree steward.

But one moment looms large. This was the first day I went to the demo garden. Even with social distancing, I enjoyed interacting, face to face, with other like-minded people for the first time in SUCH a LONG time. At times, I'd look around and see diligent workers tending the different garden beds--either deep in thought or in conversation. All were so intent on getting themselves dirty up to their elbows. And I'd smile.

Through it all, these past two years have been a journey into welcoming arms. And in such a timely manner now that life is returning to some sort of normalcy. I've found the Master Gardeners to be a superb bunch of creative minds, willing workers, and hearty souls.

Rita Holt, Loudoun County Extension Master Gardener

Garden With Me!

It's safe to say that if you're reading the *Trumpet Vine*, chances are you like gardening. But what if you're lacking space? Some of us have postage stamp backyards or small apartment balconies that we must contend with in attempts to grow.

I'm the proud owner of a tiny backyard that received what I call the "low maintenance" special when the townhome was flipped before I purchased it. I've been watching the space for a year to try to determine where the light falls through the year, when, and what will likely grow. I'm starting this four-part series so you can follow along with me as I attempt to turn my tiny backyard into the garden of my dreams.

But first things first--with all projects you must figure out where to even start. The first thing to determine is your goals. Then take those goals and consider your space. For me, my goals are:

- To grow flowers for the bees to enjoy and to maybe entice a couple of hummingbirds.
- To grow some vegetables and/or fruits.
- To remove the gravel path in my backyard because of its contribution to runoff and the number of weeds that grow there.
- To remove the invasive burning bush and to include native species.

Once you have your goals, which should be reasonable and attainable if you are starting a garden from scratch like me, you next need to consider your space.

This is the ground area I am working with:



I've noted not only my two goals, removing the invasive plant and the gravel, but also two plants that I want to pay attention to. The knockout roses are diseased and need to be removed, but because of the nature of the disease, a fungal infection, I'll need to pay attention to the soil in that area. The native dogwood is something I want to ensure is healthy, so I've noted it to check for any pruning needs or disease.

After I've determined the area that I'm wanting to start my garden in and my goals, the next step is to consider the space. The saying "right plant, right place" can save a lot of frustration and heartbreak if followed. For example, I know that in the spring and summer months my backyard receives six to eight hours of direct sunlight. This is great for growing vegetables, but not for growing hostas.

But I can use the levels of my backyard and not confine myself to only the space pictured above. For example, I actually have three spaces I can use to achieve my growing goals:

- 1) The yard pictured above, which will be great for full- and partial-sun plants.
- 2) A patio, which gets some sun but is mostly shade, which is great for planters and pots.
- 3) A deck, which gets tons of full sun and is actually warmer than the ground because of the positioning of the houses in my community.

These three areas are unique and suited to growing different things. In evaluating your own outdoor space, be creative! Many people, myself included, have had great success with planters and container gardening. If you have multiple levels, as many townhomes do, you might have microclimates or areas that are better suited to certain types of plants.

Though the season has passed for planting, now is the perfect time to plan and stock up. Many plantings need their seeds started indoors in early spring and then moved outside to continue growth in mid to late May. Now is the perfect time to start thinking about the plants you want in your yard and to plan out when they'll be purchased and what care they'll need. In that vein, it's also a good time to figure out when you want to have a soil test done. These can be picked up at the Extension Office and are the best way to evaluate your soil and what it may need.

Also, many garden supplies are less expensive in the off season, so it's a great time to start shopping for any containers or planters you might need. You can also read up on any practices you want to implement in your own garden such as rain collection.

For me, I plan to use the cooler weather to remove the plants. Now that the animals are no longer in my garden and I don't have to contend with bugs, it's a great time to get outside. Additionally, since we aren't in the growing season, I don't have to be as concerned about spreading the seeds of the burning bush upon removing it.

I will also be using this time to research specific plants to meet the goals I've outlined above. In my research, I'll consider factors such as soil needs, watering, sunlight, growth cycles, and bloom and fruit timing.

Join me for the Spring edition of the *Trumpet Vine* where I'll have my soil report from Virginia Tech, my planting schedule, plans, tips on how to sprout seeds without a greenhouse, and an update on the progress in my backyard. Happy planning!

Rachel Healy, Loudoun County Extension Master Gardener

Selecting Native Plants for Loudoun County

A few years ago, the Smithsonian held an event near the National Mall to promote planting native plants. When a young woman handed me a free packet of wildflower seeds, I inquired where the plants could be found in the wild? "The United States," she responded. Perhaps Texas bluebonnets or Sonoran giant hyssop might sprout in my garden the following spring. Geographically the United States covers a lot of territory--from the Badlands of South Dakota to the Florida Everglades, from the rocky Maine coast to Death Valley and everything in between. This country has a wide range of climates and environments. To present any plant that is indigenous to some place in this country as a native to this country is inaccurate to say the least.

So, what is a native plant? The answer isn't simple or definitive. For those of us who have fantasies of replicating some ideal of prehuman civilization flora and fauna, we need to learn to be realistic. Our environment has been so altered by human occupation and interference that we must accept that restoration of primeval habitats is impossible. Development and agriculture have significantly altered our landscapes. Common species, such as chestnut trees and American elms, have all but disappeared due to introduced blights, and ashes appear to be on their way out thanks to the emerald ash borer. Now the spotted lantern fly threatens plants in this area. Coyotes, earthworms, honeybees--all not native to this area—are common occupants. The bison are long gone, and deer populations now probably exceed any time in history. And then there's climate change. Several tree species that thrived here in the past, including sugar maples and lindens, are no longer recommended due to warming temperatures.

Yet despite the reality of our times, there is much we can do to improve our natural environments. As Doug Tallamy, an entomologist and a leader of the native plant movement,



Biennial guara Photo E.Ruina

pointed out, most land in this country is in private hands. Individual landowners can make a meaningful difference by reintroducing native plant species and thus make the environment more hospitable for native, threatened fauna. Contiguous land filled with native plants provides corridors for wildlife that require substantial acres for habitat. While most are aware of monarch butterflies' dependence on milkweed, there are many other animals that require specific plant species to thrive. Bird and insect populations are declining. By planting native species, we can increase native insect populations and in many cases food for birds.

To decide what's truly native, it's worthwhile to understand some of the criteria that determine whether a plant is native. The scientific definition of a native species, paraphrased slightly by different organizations, is:

...a native species is indigenous to a given region or ecosystem if its presence in that region is the result of only local natural evolution...during history.
(Wikipedia)

Many plants promoted as native by nurseries, articles, and gardeners are not actually native to this area. But the lines are blurry. Consider these variations of plants sold as natives:

Cultivars: A cultivar is a plant that has been “cultivated”—a plant whose structure has been altered by artificial selection to produce desirable traits by either sexual or asexual means. To produce plants with larger or more colorful flowers, disease resistance, or varying sizes and shapes, for example, breeders select individuals with desired characteristics. Cultivars’ names, but not plant species’ names, can be trademarked. Any nursery plant with a name after the genus and species designation is a plant that would not be found in that form in the wild. An example is *Physostegia virginiana* “Vivid”—an obedient plant bred for colorful flower and compact form.

Hybrids: Hybrids refer to distinctive plants that are cross-pollinated. While hybridization can be produced within species, “hybrids” often refer to plants produced by crossing two different species within the same genus. Many plants in the wild hybridize naturally, but hybrids found in nurseries are likely to be produced via human intervention. These plants can be protected via patents and will not produce offspring true to parents. Hybrids’ labels show the names of both parent plants. For example, a Bimundors oak is a cross between a White oak and an English oak: *Quercus alba* x *Quercus robur*.

Clones: A clone is a plant that produced asexually and is genetically identical to its parent. Clones occur naturally in many species that reproduce asexually, often by underground root systems. Cultivars sold in nurseries, however, are likely to be cultivars that have been bred through human intervention via asexual reproduction. A well-known landscape architect, Larry Weaner, noticed that inkberry hollies, *Ilex glabra*, found in gardens varied significantly from wild forms and had, in fact, lost their ability to clone naturally. Genetically identical plants, of course, reduce diversity and make species more susceptible to environmental threats. Inkberry is an example of a plant that is primarily sold as a cloned cultivar; it is challenging to find inkberry in its wild form in nurseries.

There hasn’t been significant research done on human-created variations of plants to determine the impact on local ecology, and it undoubtedly varies significantly for each plant variation. It’s important to understand, however, that a pollinator may or may not enjoy a plant that has been altered significantly from its wild form. Cultivars may be more attractive than their wild counterparts but may not perform in the ecological system as evolved.

How do you know if a plant is native to our area, specifically Loudoun County? Many plants sold in nurseries as natives do not naturally reside in this part of Northern Virginia. Some widely sold species are sold as ‘natives,’ but did not evolve in our area. Common examples in this area include inkberry (*Ilex glabra*) native to southeastern Virginia but not to any contiguous counties; coneflower, native in this country but introduced in this region; and *Amsonia hubrechtii* (threadleaf bluestar), a lovely plant discovered in Arkansas. In addition, nurseries sometimes mislabel plants. One common example is witch hazel; *Hamamelis virginia* is native to this area, but *H. vernalis* is not. The two species look very similar, but *H. vernalis* blooms in late winter versus fall for *H. virginiana*. Many nurseries don’t know the difference.

The definitive resource for determining species' native habitats is the *Flora of Virginia*, a heavy, costly, and very detailed tome that is available free online as the *Digital Atlas of the Virginia Flora*, vaplantatlas.org, and also as an app. The *Atlas* clearly maps species' presence by county and identifies common but introduced species. Of course, this resource is based on human observation and requires regular updating. Sometimes researchers can't determine what is native and what isn't, and there are species variations that may be present in one area but not another. Plants, of course, don't observe county or state boundary lines, so take precise locations with a grain of salt.

To further complicate species habitats, there is growing awareness of ecotypes and their importance. A single plant species can evolve quite differently from one area to another.



Wild Geranium Photo E. Ruina

Several years ago, a botanist told me that switchgrass, a native grass being planted in restoration projects, tends to form monocultures in this area possibly due to the fact that the ecotype seeds were imported from other regions. Several plant catalogs now sell specific ecotypes, but for most plants, it is not feasible to determine what your area's natural ecotype is or how to obtain it. It's important to be aware, however, that seeds and plants ordered from nurseries both in and out of this area are likely to be sourced from a different part of the country. It is notable that two not-for-profit organizations in this region are working to reproduce local ecotypes—Earth Sangha in Springfield, Virginia, and The Clifton Institute in Warrenton, Virginia.

Consider specific challenges of some of our noteworthy native plants. Although pests have virtually decimated some of our native trees (see above), some experts encourage continued planting of threatened species with the hopes of discovering a resistant variant. In some cases, hybrids and cultivars may be the best option for reintroducing species we have lost or nearly lost. Anthracnose in dogwood (*Cornus florida*) can be a threat, although there are several disease-resistant strains now available. A fungal disease, cedar apple rust disease, can make species of serviceberry unsightly. Pests and diseases are inevitable, but it's worthwhile to do some research to determine if there are serious challenges to plants you are considering.

Finally, although plants are susceptible to many environmental hazards, it's impossible to ignore one of the biggest threats: deer. Deer *love* native plants! Apparently, deer taste varies by area. In our HOA, deer will initially bypass oaks and redbuds to devour staghorn sumac (*Rhus typhina*) before we can get them out of pots. A plant described as "deer candy" is likely to disappear quickly in a vulnerable spot. If you admire strawberry bush, also called hearts-a-burstin' (*Euonymus Americanus*—a plant with striking fruits in fall—be sure to plant it in an area inaccessible to deer. Consider plants that are "deer resistant," for accessible areas, but be aware that deer will eat almost anything if desperate. Deer protection is frustrating but may be essential.

The growing enthusiasm for native plants is exciting and is increasingly transforming our local gardens and landscapes. Local agencies and HOAs are reconsidering planting regulations as

more people are educated about the importance of native plants for maintaining wildlife as well as for soil and water quality. While some of the challenges presented in this article may seem daunting, the fact is that our own native plants will thrive here. It's worthwhile to do a little research, but after being established, native plants need little to no human intervention.

Because the definition of "native" is imprecise it is up to each gardener to determine his or her own criteria for selecting plants. Despite our best efforts, we can't always determine the precise spot where any particular plant will do well, so be open to trial and error, and be flexible. Don't be discouraged by a few failures. Observe and learn. Many native plants can be appreciated for their year-round beauty. The benefits that native plants provide for our environment is reward enough—and enjoy the increase in birds and butterflies you are likely to observe as native plants proliferate in this area.

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Ellen Ruina, Loudoun County Extension Master Gardener



Hairy Beardtongue Photo E Ruina

Growing American Wisteria

As we are approaching winter, our days are filled with the joy and excitement of the holidays. And when the holidays are over, we are desperately waiting for the bright and colorful days that spring offers. Many of us spend our winter days dreaming about how pretty our gardens will be during spring and summer. However, making that dream a reality can be challenging as we have so many choices and we don't often know where to start. While there are many beautiful native plants to pick from, my absolute favorite is American wisteria. Wisteria is a flowering vine in the legume family that puts on a stunning show when in bloom. The spectacular purple blooms cascading from the vine can add an enchanting element to any garden. While there are many beautiful species of wisteria, growing the native variety is recommended.



Native wisteria, the Virginia Native Plant Society [Plant of the Year for 2021.](#)

Why grow native over the non-native variety?

The non-native varieties of wisteria such as Chinese wisteria and Japanese wisteria were brought to the United States in the early 1800s to grow on gazebos, arbors, walls, and fences as ornamental vines. These varieties can grow rapidly and can reach up to 70 feet in height, making it a perfect ornamental vine. Climbing non-native wisteria vines grow aggressively, their roots spread far, and the vine continuously sends out new shoots that need to be pulled periodically. The invasive variety can live up to 50 years or more and in their lifetime, they can strangle and kill the native trees to clear the forest canopy while increasing sunlight to favor their aggressive growth. Wisteria seeds, leaves, and fruits are toxic. Therefore, the chances of germination by

animal deposits are low. However, once a mature vine creates way for more sunlight, dropped seeds in the nearby area can easily germinate and one day become another aggressive vine clearing more native trees. When invasive species take over and start causing harm and eventually kill our native trees, it disrupts our ecosystem.

American wisteria, on the other hand, provides many benefits to our ecosystem such as being a host plant to marine blue, zarucco duskywing, and skipper butterflies. The flowers are a great source of nectar for bees. Many people hesitate to plant wisteria because of how aggressive it can get if not pruned regularly. However, American wisteria is comparatively slow growing, less aggressive, and can reach up to 40 feet in height unlike the non-native varieties that can grow up to 70 feet high.

How to care for American wisteria:

American wisteria likes slightly acidic and well-drained soil. Place it in an area that gets full sun as the vine will struggle in full shade areas and will not grow. Pruning is necessary to keep wisteria in control and to encourage flowering. The best time to prune wisteria is in spring after flowering stops. Both native and non-native varieties should be pruned regularly to avoid them getting out of control.

Ishita Parikh, Loudoun County Extension Master Gardener

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Why Plant a Tree?

From the Nature Conservancy website:

"The true meaning of life is to plant trees under whose shade you do not expect to sit."
NELSON HENDERSON, Farmer and WWI Veteran

Brian Dennis, The Washington Post, August 14, 2022:

"To slow Earth's warming, humans will have to rely on a major assist from trees, wetlands, peatland and other landscapes that soak up amounts of carbon dioxide each year."

Those who are concerned about climate change and the environment may be wondering what individuals can do to help. It's a frustration knowing how critical the environmental crisis is.

As we've heard often, make your carbon footprint as small as possible. That's good advice. There are many ways to use less energy that emits greenhouse gases such as turning lights out if they are not needed, adjusting your thermostat a bit higher in the summer and lower in the winter, planning trips in your car that are as efficient as possible (i.e., do several errands at one outing), composting your kitchen scraps, etc. All these actions will help. One person's activities may seem small, but thousands or millions of "one person" can make a big difference.

There's more each of us can do if we have the ability to improve the natural environment around us. Specifically, if we own property or can influence local authorities such as HOAs (Homeowner Associations) or municipalities to make good environmental choices for the land over which they are responsible. This article outlines how trees are a good way to help sequester carbon, lower temperatures, improve the quality of water and the air, absorb pollution (both in the air and soil), and provide habitat for wildlife. In addition, individuals can choose to donate to organizations that support the environment and seek to improve it via lobbying and volunteering efforts. Such donations are private actions and completely voluntary.

There are many places to get free or very low-cost trees. Check local county government or organizations such as soil and water districts and conservation societies. These organizations typically sell or give away small bare root specimens in the spring and/or fall. These little trees are excellent choices because, when you plant them where they will grow, their roots will develop naturally, and the tree will tend to be healthier and grow faster than a tree bought from a nursery in a tub or bag-and-burlap. For a good discussion of this issue, see the Trumpet Vine article in the Summer 2021 edition, "Plant for the Future". This article explains in more detail why we should plant smaller rather than larger specimens. Tub and bag-and-burlap trees are larger, but their roots have been severely damaged by either growing in a small space (tub) or drastically cut to fit into the bag-and-burlap wrapping. Small bare root trees can be placed in pots for a short period (less than a year) without badly damaging the roots, but they should be planted as soon as you have found a place to put them and prepared the hole. I often park bare root trees I get in the spring in adequately large pots until the fall, which is by far the best time to plant trees.

Don't plant a tree deeper than the original soil line and make the hole three times as wide as the pot it was in. Plant a bare root specimen in a hole three times wider than the roots. If you live in an area with hungry deer, place tree tubes (plastic tubes) or fencing around the tree until it gets

5-6 feet tall. Tree tubes also enhance growth rates. For additional details on planting trees, see the Trumpet Vine articles in the Spring 2020 issue and the Fall 2019 issue, "Fall Tree Planting is Best".

How Far Should a Tree be Planted from a House?

To get the most useful shade on a house, place larger trees (70 feet or more at full height) 20 feet from the house. Plant trees up to 70 feet about 15 feet from the house, and smaller (up to 30 feet) trees may be planted 8-10 feet from the house.

When choosing a tree to be placed near a house, sidewalk, or driveway, do some research on the characteristics of the lateral roots. These are un-tapered, rope-like roots that grow outward from the trunk and form a network to support the tree. For example, gum trees have strong lateral roots and are more appropriately grown away from foundations and pavement. Lateral roots are also likely to be damaged by lawn mowers.

Sequester and Store Carbon

Trees reduce the amount of carbon in the atmosphere by sequestering carbon in new growth every year. As a tree grows, it will store more carbon in its accumulated tissue.

As stated by Penn State Extension, "Trees are without a doubt the best carbon capture technology in the world". Wood is an incredible carbon sink because it is made entirely of carbon, it lasts for years as a standing tree, and takes years to break down after the tree dies.

The amount of carbon annually sequestered is increased with the size and health of the trees. About 30 percent of carbon emissions from burning fossil fuels are taken in by forests, an effect called the terrestrial carbon sink. A conservative estimate is the average tree absorbs an average of 10 kilograms, or 22 pounds, of carbon dioxide per year for the first 20 years. Deciduous trees, like oak, are generally better at storing carbon than their coniferous counterparts because their wood is denser.

Controlling invasive plant species is an important strategy for enhancing carbon capture. While many non-native/invasive plant species can grow rapidly and appear to be good carbon sinks, they are not. Invasive species disrupt native ecosystems, change the makeup of the local soil microbes, and prevent tree regeneration, all of which interferes with a forest's ability to sequester carbon. Native trees and plants are adapted to thrive in local conditions and tend to function better as carbon capture mechanisms. Native plants also provide other important benefits such as wildlife habitat.

Lower temperatures

Leaves and branches reduce the amount of solar radiation that reaches the area below the canopy of a tree or plant. The amount of sunlight transmitted through the canopy varies based on plant species. In the summertime, generally 10 to 30 percent of the sun's energy reaches the area below a tree, with the remainder being absorbed by leaves and used for photosynthesis, and some reflected back into the atmosphere.

Urban trees influence air temperatures and building energy use, and consequently alter carbon emissions from numerous urban sources (e.g., power plants).

Trees and vegetation lower surface and air temperatures by providing shade and through evapotranspiration. On a hot, sunny summer day, the sun can heat dry, exposed urban surfaces like roofs and pavement to temperatures 50 to 90°F (27 to 50°C) hotter than the air, while shaded or moist surfaces—often in more rural surroundings—remain close to air temperatures. Tree shading reduces the temperatures inside parked cars by about 45°F (25°C). On average, the difference in daytime surface temperatures between developed and rural areas is 18 to 27°F (10 to 15°C).

Trees and vegetation are most useful as a mitigation strategy when planted strategically around buildings or to shade pavement in parking lots and on streets. Researchers have found that planting deciduous trees or vines to the west is typically most effective for cooling a building and thus reducing demand for air conditioning, especially if they shade windows and part of the building's roof.

A US Department of Agriculture study simulated the effects of trees on homes in various communities throughout the United States. Assuming one tree was planted to the west and another to the south of a house, the model predicted that a 20-percent tree canopy over the house would result in annual cooling savings of 8 to 18 percent and annual heating savings of 2 to 8 percent. Although this particular model included benefits from trees planted to the south of a building, experts generally suggest planting to the west and east of buildings, taking care when planting to the south to avoid blocking desired solar heat gain in the winter.

By reducing energy demand, trees and vegetation decrease the production of associated air pollution and greenhouse gas emissions.

Improve the Quality of Air, Water and Soil and Reduce Pollution

Trees play a key role in capturing and absorbing rainwater thereby reducing the risk of natural disasters like floods and landslides. The absorbed water is used by surrounding vegetation, and water that is not used by plants is retained as ground water. This process prevents harmful waterslide erosion and reduces the risk of over-saturated ground and flooding.

Surface urban heat islands degrade water quality, mainly by thermal pollution. Field measurements from one study showed that runoff from urban areas was about 20-30°F (11-17°C) hotter than runoff from a nearby rural area on summer days when pavement temperatures at midday were 20-35°F (11-19°C) above air temperature. This heated stormwater generally drains into storm sewers and raises water temperatures as it is released into streams, rivers, ponds, and lakes. Water temperature affects all aspects of aquatic life, especially metabolism and reproduction.

Gaseous pollutants such as ozone, carbon monoxide, nitrogen oxides, sulfur dioxide, and ground level ozone are absorbed by trees through tiny openings in leaves, "stomata", and then are broken down within the tree. According to the Arbor Day Foundation, in one year a mature tree will absorb more than 48 pounds of carbon dioxide from the atmosphere.

The largest pollutant type consists of particulate matter that is less than 2.5 microns in size. According to the International Society of Arboriculture, particulates are solid rather than gaseous. Particulates are generated by combustion of fossil fuels, construction and demolition, industrial processes, soil tillage and erosion, deforestation, and complex reactions between sunlight and gaseous pollutants. Particulates have been associated with respiratory (asthma), cardiopulmonary

(heart and lung) diseases, and cancer. These particulates are not absorbed by trees the way that gaseous pollutants but are removed from the atmosphere as they collect on the surfaces of leaves.

Through a process known as phytoremediation, root systems of trees and other green plants act like filters and remove, degrade, or stabilize pollutants and contaminants such as toxic metals from soil or groundwater. Fast growing trees such as willows and poplars are ideal for phytoremediation because they grow quickly and have deep and extensive root systems.

Tree shade can keep gas tanks of parked cars cooler, which lowers evaporative emissions of volatile organic compounds (VOCs), a critical precursor pollutant in the formation of ground-level ozone.

Provide Habitat for Wildlife

The entire tree offers habitat for wildlife from below ground roots to the tips of branches. Habitat includes shelter, nesting places, food in the form of berries, seeds, sap, etc., hunting spots, and resting areas. Wildlife benefiting from trees include insects, fungi, birds, amphibians, reptiles, and small mammals.

Among trees most beneficial to wildlife are oaks, red cedar, birch, willows, beech, black cherry, native plum, and native pines.

Dead and dying trees are as important to wildlife as live healthy trees. These are called "wildlife trees". If you have a dead or dying tree on your property which needs to be removed for safety or aesthetics, consider leaving a snag. A snag is a standing portion of the trunk which can be up to 20 or more feet tall. Dead tree trunks without branches pose little danger of falling over. They provide a wealth of food sources in the rotting wood as well as places for cavity nesting birds to raise their young.

And, Trees Make You Feel Better

A paper published by the National Institute of Health in 2019 states, that studies have found that walking in the woods, or what the Japanese call "forest bathing" (Shinrin-yoku), has positive physiological effects, such as reduction of blood pressure, improvement of autonomic and immune functions, and psychological effects of reducing stress, alleviating depression, and improving mental health.

Various studies indicate when people can see trees and landscapes:

- Patients have better and hospital recoveries and hospital stays are shorter by several days.
- Workers exhibit better work satisfaction resulting in better moods, more patience, fewer health problems, increased satisfaction, and reduced absenteeism.
- Young people have better test scores and self-discipline when they have views of green landscapes from their apartment windows than those in a control group who did not look out on greenery.

For all these reasons, and more, plant a tree.

Sharon Perryman, Loudoun County Extension Master Gardener

Sources:

PennState Extension, "[How Forests Store Carbon](#)"

[Onetreeplanted.org](https://onetreeplanted.org)

National Park Service, "[Carbon Storage by Urban Forests](#)"

US Environmental Agency, "[Using Trees and Vegetation to Reduce Heat Islands](#)"

National Institute of Health, National Library of Medicine, National Center for Biotechnology Information study entitled "Environmental Health and Preventive Medicine", 2019, this article can be found at: [A comparative study of the physiological and psychological effects of forest bathing \(Shinrin-yoku\) on working age people with and without depressive tendencies - PMC \(nih.gov\)](#)

New York State Department of Environmental Conservation article, "Immerse Yourself in a Forest for Better Health". This article can be found at www.dec.ny.gov/lands

<https://www.edmondok.gov/1234/Trees-Improve-Air-Quality>. The air quality data within this article was generated by a study conducted in 2012 using an Urban and Community Forestry Cost-Share Assistance Grant provided through the Oklahoma Urban and Community Forestry Council and Oklahoma Forestry Services.

[Arbor Day Foundation, The Healing Power of Trees, Tree City Bulletin No. 71](#)

Past Trumpet Vine issues can be found at [Trumpet Vine Newsletter / Loudoun County Master Gardeners /Archived TV Publications.](#)

Please Note: It's not Too Late to Plant Bulbs!

If you are not able to dig into the ground with a shovel because it is frozen solid it is too late to plant spring blooms. However, if the ground is not frozen solid and you can dig into it, you can plant fall bulbs. Even if there is a layer of snow on the ground if it's not frozen, you can still plant. The end of January is probably the cut off point. These bulbs will come up a little later in the spring, but they will be fine. Plant as you normally would with a little fertilizer. If you find some bulbs tucked away after January, plant them in the spring. They won't bloom until the next year, but by planting them in the spring, the bulbs will not rot waiting for the fall to come.



Winter Pruning

Winter is a great time to walk around your property and assess where trees and shrubs may need some pruning. With leaves off the trees, it is easier to see where branches may be diseased, broken or rubbing against one another. As winter winds kick up, getting dead branches down becomes a safety measure around the house. Are there shrubs that have overgrown their location and might be limiting the view from inside the house or bumping up against the deck?



With most of the leaves gone it is easier to see where to make thinning cuts on this Japanese maple. Photo by Jan Lane

Pruning when a tree or shrub is dormant (not actively growing), will take advantage of its natural ability to heal more quickly and cause it less stress. When pruned, a tree responds by closing the wound around the cut and stimulating new growth. By pruning in winter no new growth will occur until spring, and the tree will draw upon stored energy to close the wound. Another benefit is that many disease agents (bacteria, parasites, insects, and fungi) are also dead or dormant and won't infect the wounded area.

Pruning Deciduous Trees

Before taking that saw or clipper in hand, it is important to understand the anatomy of a tree and what to prune. The Virginia Cooperative Extension (VCE) website has excellent resources regarding how, when and what to prune. 'A Guide to Successful Pruning: Pruning Deciduous Trees' (www.pubs.ext.vt.edu/430/430-456/430-456.html) provides a detailed overview.

In brief, branches that require pruning include those that are damaged or rubbing against each other, thereby creating an area where disease and infection can enter. Water sprouts (small shoots popping up on branches) or suckers (sprouts at the base of a tree) should be removed as well as they can reduce flowering and fruiting and change the structure of the tree.



Water sprouts that should be removed from a Yoshino Cherry tree Photo by Jan Lane

Cuts to remove such branches are called "thinning cuts" and involve removal of the branch to the point where they start, either on a larger branch or on the trunk of the tree. Using the diagram on the following page, note where the branch collar occurs in relation to the branch being pruned. If the branch being removed is greater than 1" in diameter use the method outlined in the diagram of making three cuts. Taking time to use this method will avoid tearing the bark, which could allow disease agents to infect the tree. (For greater detail on how to use the "three cut" method refer to 'A Guide to Successful Pruning' cited above.)

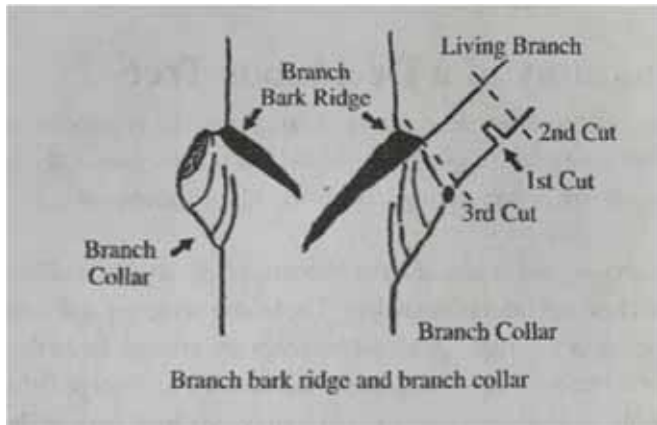


Diagram of the three-cut method.

Illustration taken from "A Guide to Successful Pruning: Pruning Deciduous Trees"

Even though there is a reduced chance of infection occurring during winter pruning, it is still vitally important to disinfect tools before and during the pruning process. Disinfecting agents such as rubbing alcohol, or brand name products like "Listerine" or "Lysol" can be used to disinfect pruning tools. However, using household bleach is not recommended as it can be corrosive to metal blades.

For more information on when to prune specific trees check out 'A Guide to Successful Pruning: Deciduous Tree Pruning Calendar' (www.pubs.ext.vt.edu/430/430-460/430-460.html).

Pruning Shrubs

While putting up holiday lights this year it became apparent how overgrown the azaleas are at the front of my house. I was tempted to pull out the pruners and start cutting them back, but that would have eliminated their beautiful blooms next spring! Late winter is a time to prune *summer flowering* shrubs (not those spring flowering shrubs such as azaleas!) to reduce their width and height, and in some cases to rejuvenate the shrub.

The timing on pruning depends on whether the shrub blooms on 'new wood' or 'old wood.' Spring flowering shrubs bloom on one year old stems. This means that they have already set their buds for next year on the new growth that occurred this year. Spring flowering shrubs are best pruned immediately after they are done blooming. Summer flowering shrubs and trees bloom on "new wood", the woody stems that grow in the spring. Summer blooming hydrangeas, crape myrtles, and beautyberries for example, can be pruned in late winter. 'A Guide to Successful Pruning: Shrub Pruning Calendar' www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/430/430-462/SPES-323.pdf provides information on specific shrubs and when best to prune.

By selecting the right shrub for the right space, and thinking ahead about its mature size, pruning may be eliminated altogether. 'Selecting Plants for Virginia Landscapes: Showy Flowering Shrubs' (HORT-84-PDF.pdf vt.edu) identifies a number of shrubs perfect for this area, with advice on care, pruning when necessary, and placement. A special note for anyone thinking about pruning a crape myrtle – please read this first SPES-387P.pdf vt.edu) before accidentally committing "crape murder"! We've all seen butchered crape myrtles – sticks extending skyward that are bereft of leaves—ruining the shape of the shrub.

Additional VCE Resources

The Virginia Cooperative Extension website ([Virginia Cooperative Extension | Virginia Cooperative Extension | Virginia Tech \(vt.edu\)](#)) is an excellent resource when questions arise about the care of trees and shrubs in your yard. In addition, the VCE Loudoun County Master Gardeners operate an in-person and virtual Help Desk to answer questions regarding best practices in your home garden. Click here to learn how to contact us for assistance researching and finding solutions to problems: <https://loudouncountymastergardeners.org/gardening-advice/help-desk/>. We tend to think that gardening is limited to warmer months. This winter make sure to get out and assess the how your trees and shrubs are faring.

Jan Lane, Loudoun County Extension Master Gardener

Yes, things are getting back to normal! Here's a message we received announcing the resumption of a long time favorite:



Greetings from the PLA!

After a 2-year hiatus, we are pleased to announce the **38th Annual Seminar of the Piedmont Landscape Association!** This event will take place next year, **Thursday February 2, 2023** at the historic Paramount Theater in downtown Charlottesville.

We are thrilled to bring a diverse array of national authors and experts to discuss topics relevant to our local Central Virginia gardens and landscapes. This year's lineup includes an all-star cast with over 150 years of collective experience in the industry:

- Colston Burrell: *Principal, Native Landscape Design & Restoration*
- Peggy Cornett: *Curator of Plants at Monticello*
- Thomas Rainer: *Principal, Phyto Studio, LLC*
- Doug Tallamy: *Professor, Department of Entomology and Wildlife Ecology, University of Delaware*

Please save the date for what will be an insightful and though-provoking day. Details and ticket information will be available in December. If you would like more information, please feel free to reach out at info@piedmontlandscape.org. Thanks to all of you on behalf of the entire board of the PLA!

Urban Forestry--Trees by Numbers

Urban forestry is a complicated task for cities, towns, and even communities. There are many difficult situations for every urban area. Many things need to be considered before planting trees, some being temperature zones, weather patterns, community size, trees native or typical to the area, and possible new tree planting locations. The goal is to increase the tree canopy and keep it healthy. Planting trees now means that you are looking for future benefits 50 years down the road.

There are two evidence-based “rules” proposed on how to keep tree canopies high quality and sustainable green spaces in an urban environment. The first is Santamour’s 10-20-30 rule. This is a push for tree diversity. Catastrophic tree loss in urban areas often comes in the form of new invasive insects or diseases brought in from other countries. In the past, cities have used hardy species of trees proven to endure the diverse problems of an urban environment. The tendency was to plant a monoculture through the city due to the tenacity of the species. What happened was the gypsy moth, the emerald ash borer, and Dutch elm disease. Pests and diseases were able to wipe out whole neighborhoods of trees leaving cities devastated at the loss of substantial tree canopy cover. Santamour’s 10-20-30 rule is directed toward what types of trees should be used to populate a city. The first number indicates that no more than 10 percent of the same species should be used. The second number indicates that no more than 20 percent of the same genus should be used. The last number advises that no more than 30 percent of a family group should be used. The idea behind diversity is the hope that if a pest should come through a city, a smaller percentage of trees might be damaged or lost due to the invasion.

This is harder to do than you might think. Let’s take the example of the eastern white pine, which is a favorite landscaping tree. It comes from the Pinaceae family, which includes pines, hemlocks, larches, firs, cedars, and spruce. Only 30 percent would be used from this family. The genus of the eastern white pine is *Pinus*, which includes about 115 species of pine trees. These are distributed throughout the northern hemisphere and include many that wouldn’t be used in the United States. There would be 20 percent of the choices left of that number. The eastern white pine’s species is *strobus*, which differentiates it from the pitch pine (*Pinus rigida*) or the red pine (*Pinus resinosa*), etc. Only 10 percent of any landscape should then contain eastern white pines. The number of choices decrease further due to what is available in nursery stock for cities to choose from.

There are thousands of tree species, but identifying what is already in place and procuring what is needed to diversify can be a herculean task. Most larger cities have an urban forestry department to deal with their tree canopy needs. Unfortunately, most are small and overworked, only dealing with reported problems and limited budgeting. This is possibly an easier task in smaller communities that can get volunteers such as Master Gardener Tree Stewards to help with identifying and locating areas that can be planted. So, this rule may not work everywhere, but if research is done, a community can create a best-case scenario with a limited selection of tree species.

The second tree numbers rule is a lot more health-based, which may make it easier to obtain community backing. It was created by Cecil Konijnendik and is the 3-30-300 rule. This is based on how you should plan your tree canopy. The first number, 3, is the minimum of how many trees a person should be able to see out of their window from home, work, or school. The second number, 30, represents the tree canopy percentage in each neighborhood within a city. The third number, 300, is the minimum distance of meters any individual should live from a park or green space.

The idea behind this 3-30-300 rule is tree equity. This is not easy to reach in cities that have built up every available open space. In New York City, the New York Restoration Project encourages communities to transform vacant lots into gardens. Other cities get the community involved in planting and caring for the trees in their neighborhoods. Everyone in a neighborhood should reap the benefits of cooler homes shaded by trees, quality green areas to play in, cleaner air quality, beauty, and engagement with the environment. This is what urban forestry should be about, not just pruning problem trees, taking down dead ones, and sticking in whatever they can find to replace them.

Starting tree programs can be daunting on every level of government. Most cities have master plans that are a framework for future growth development, and tree planning should be part of it. Tree planting should be on the plan taking it out into a 30- to 50-year growth timetable. This ideally would include pruning, replacing, establishing a 3-year maintenance plan for newly planted trees, developing tree corridors for wildlife, and establishing tree equity for new building sites. It needs to address climate action planning that involves future climate change issues and tree adaptability. Strategic planting of trees should make connections between existing tree canopies and the total canopy percentage desired overall.

Sustainability for the future is the main goal for tree planting when developing a plan. So, keep in mind Santamour's 10-20-30 rule of looking at diversity in your tree canopy, and Cecil Konijnendik's 3-30-300 rule of developing a plan that lets the community enjoy the benefits of quality tree areas personally for a long time.

Cathy Anderson, Loudoun County Extension Master Gardener and Tree Steward

For more on Santamour's 10-20-30 rule, see this short but informative article *Urban Design: The 10-20-30 Rule for Tree Diversity*

<https://www.smartcitiesdive.com/ex/sustainablecitiescollective/urban-tree-diversity/116641/>

For more on Cecil Konijnendik's 3-30-300 rule, see:

<https://iucnurbanalliance.org/promoting-health-and-wellbeing-through-urban-forests-introducing-the-3-30-300-rule/>

Growing and Using Culinary Herbs

After the hustle and bustle of the holidays have passed and plant lovers, stuck inside because of the temperatures, begin to anticipate the renewal of spring and the return of warmer weather, we inevitably begin to contemplate what we might plant in the coming year. As you begin to peruse bulb or seed catalogs, home magazines, and outdoor landscape pictures, you might consider the benefits of planting culinary herbs.

Herbs have a long history, playing an important role in our lives with many uses among many cultures. The use of herbs can be tracked back to ancient Egyptians. Ancient Greeks and Romans crowned their revered heroes with dill and laurel. Early records show that herbs were used to hide odors and enhance bland food. Early American settlers planted herb gardens for illness, fragrance, and flavor. If you have never grown herbs before or are overwhelmed with the many choices, you may want to start or restart your journey focusing on culinary herbs.

There has been a resurgence in the interest of herbs in the last few decades. This revival can be attributed to many things including increased interests in ethnic cuisine, reality and celebrity cooking shows, an abundant access of recipes via the Internet, the “farm to table” trend, healthful eating initiatives, and the known benefits of companion planting including minimizing pests.

Indeed, herbs are a carnival for the senses with each having a distinct texture, flavor, smell, and visual appeal. Planting, tending, and harvesting them is very rewarding. To experience these attributes in their most robust form is to utilize them fresh. Although many culinary herbs are widely available today in grocery stores, mostly in their dried form, they can be one of the most expensive items to purchase. Not only are they expensive, but dried herbs also lose their flavor over time and can result in a lot of waste if you do not use them regularly. Harvested herbs are also available, but selections are limited and the quality of these can be less than desired because the shelf life is very short.

One of the biggest mistakes that growers make when planting herb gardens is planting too many types and varieties at once. Planting a few to start and then adding each year is a good way to approach the exciting world of growing herbs. The first step is to determine what to plant. Look at your spice cabinet; what do you use regularly? What keeps coming up in recipes that's not available when you want to use it? You will also want to consider your environment. Location matters if you want to give your herbs the best chance and minimize any pests and disease. Chives, parsley, and basil are favorites that are very versatile and great for beginners. Other classic culinary herbs include dill, mint, oregano, rosemary, sage, thyme, and cilantro. Each of these has a variety of cultivars from which to choose.

Growing Requirements

Most herbs are easy to grow. They grow well in the ground and in containers, and they can be grown indoors or outdoors depending on the time of year and weather conditions. Regardless of whether you grow indoors or outdoors, location is important. If growing inside, plants will do best with good light, so placing them near a southern-facing window is necessary. Container plants should be mobile so they can be moved easily and placed in a convenient, easily accessible location like a deck or patio. The closer they are to your kitchen, the more likely it is that you will harvest

and use them while cooking. The same goes for herbs planted in the ground. Plants that require more sun or water will not do well placed with plants that require less. Some herbs, especially those in the mint family, can be very invasive. Unless you want them to take over, you will want to inhibit their ability to spread. You can minimize their spreading by using containers when planting them in the ground.

Herbs prefer six or more hours of sun per day and good drainage. In places where you have only four to six hours of morning sunlight (partial sunlight), try chives, lemon balm, parsley, mint, borage, or Cuban oregano. Be sure that you consider growing conditions if placing several types of plants together in pots.



Basil



Chives



Dill



Mint



Oregano



Parsley



Rosemary



Sage



Thyme

Common Culinary Herb	Life Cycle	Light	Soil--All Well-Drained
Basil	Annual	Full Sun	Moist, Fertile
Chives	Perennial	Full Sun	Moist, Fertile
Cilantro	Annual	Full Sun to Partial Shade	Moist, Fertile
Dill	Annual	Full Sun	Moist, Fertile
Mint	Perennial	Full Sun to Partial Shade	Moist, Fertile
Oregano	Perennial	Full Sun	Average Soil
Parsley	Biennial	Full Sun to Partial Shade	Moist, Fertile
Rosemary	Tender Perennial	Full Sun	Fertile
Sage	Perennial	Full Sun to Partial Shade	Average Soil
Thyme	Perennial	Full Sun to Partial Shade	Sandy Soil

When it comes to herbs, transplanting is easier than starting from seeds. Many grocery stores carry fresh herbs like basil, parsley, dill, and cilantro as small live plants that are easily transplanted into a larger pot or moved outdoors with some acclimating in the spring. It is especially easy to get rosemary and sage transplants around the holidays at many retail establishments as they are occasionally used as decoration or for gifts.

Some other herbs that can be fun to grow and use for culinary purposes include nasturtium, which is most often seen as an edible decoration; borage, whose flowers taste like cucumber and are great to freeze inside ice cubes; tarragon, which makes for a very lovely decorative and flavorful vinegar; and lavender that can be used to flavor drinks, cupcakes, and even ice cream. Chamomile, bee balm, lemongrass, and verbena are great choices for tea lovers.



Borage



Nasturtium



Lavender

Common Food Pairings

Sage	Pork and Poultry.
Rosemary	Potatoes, Winter Squash, Lamb, Poultry, Carrots, Breads.
Basil	Peppers, Tomatoes, Pasta Dishes.
Tarragon	Eggs, Vinegars, Chicken.
Thyme, Oregano, Parsley	Soups, Pasta, Poultry, Almost Everything!
Dill	Cucumbers, Potatoes, Salmon, Salads.
Mint	Yogurt, Salads, Mediterranean Dishes.
Chives	Anything for Which You Want a Very Mild Onion Flavor.

Preserving Herbs

Once you get started, you may find an abundance of herbs. Probably the easiest way to preserve herbs is by freezing in bags, containers, or ice cube trays. Basil, chives, dill, parsley, and thyme are all good candidates for freezing and using in soups and stews. Not all herbs will stand up to freezing and are better in flavored oils, vinegars, jellies, or dried. Herbs can be dried with a dehydrator, by using drying racks, or by hanging upside down to dry in a warm, airy room. Drying herbs is a bit more intensive and does require some patience and experimentation.

Herbs make great gifts for family and friends--either freshly cut or as cuttings for them to start their own herb garden.

Tips for Growing and Using Herbs

- Start small.
- Know the growing conditions for each plant. This includes water, light, climate, growth rate, and life cycle.
- Harvest frequently to keep your plants robust and to keep them from going to seed, which can affect quality.
- Use as soon as possible after harvest.
- Chop finely to increase the natural oils.
- Fresh herbs are better at room temperature as a finishing touch or when added toward the end of the cooking process.
- Experiment and swap out different herbs for others with a similar profile that you have on hand.
- The milder the food, the less herb should be used.
- 1/3 teaspoon of dried herbs is equal to 1 Tablespoon of fresh herbs when converting for a recipe.
- Try adding herbs to butter or cheese to dress up a simple snack.

Culinary herbs are a great choice when preparing for spring. You will be rewarded with your harvest throughout the year as you explore the culinary herbs' many uses and enjoy increased flavor in your dishes.

Thersa Hutton-Sherman, Loudoun County Extension Master Gardener

'Tis the Season--for Cacti

If you've been in a grocery store during the holiday season, then you've certainly seen a Christmas Cactus. These succulent looking plants with vibrant red, pink, orange, cream, or purple blooms make for great host gifts or centerpieces. However, many owners experience frustration the following year when the plant won't bloom again. This is an easily fixed issue with the right identification and care.

There are two primary types of holiday cacti seen in the winter season: the Christmas Cactus and the Thanksgiving Cactus. The Thanksgiving Cactus typically blooms around Thanksgiving and about a month before its counterpart, the Christmas Cactus, blooms.

Though they are different subspecies, the Thanksgiving Cactus and the Christmas Cactus can be difficult to tell apart. While care of the cacti is similar, the different bloom times can lead to the assumption that something has gone wrong and an overcorrection from plant owners.

Take these two images below as an example. Can you tell which is a Thanksgiving Cactus and which is a Christmas Cactus?

A



Photo by [spablab](#) licensed under [CC BY-ND 2.0](#).

B



Photo by Christina Schluter

Answer: **A** is a Christmas Cactus (*Schlumbergera* × *buckleyi*) and **B** is a Thanksgiving Cactus (*Schlumbergera truncata*)! Did you get it right?

Don't worry if you weren't able to guess correctly or even thought it was the same plant! These plants are very similar looking, which leads to the difficulty of telling them apart. In fact, many people with Thanksgiving Cacti think they have Christmas Cacti!

The key differences in the plants' features, aside from bloom time, is found between the stems and flowers.

Stems

There are several distinct features of the stems to compare to help identify your holiday cactus:

Feature	Thanksgiving Cactus	Christmas Cactus
<i>The Arch</i>	Stems grow upright then arch down over the sides of the pot.	Stems hang down, trailing over the side of the pot, with no upward growth. This creates a less pronounced arch shape.
<i>The Leaves *</i>	Stem segments come to sharper points and have two to four teeth at the tip. These look vaguely like cat ears.	Stem segments are flat and have a smooth scalloped edge.
<i>Fragility</i>	Stems are hardier and do not easily break.	Stems are fragile and more prone to breakage.

* The waxy green segments may look like leaves, but they are the stem and not technically leaves.

Compare the two photographs below:



Christmas Cactus Photograph by [AllieKF](#) licensed under [CC BY-NC-SA 2.0](#).



Thanksgiving Cactus Photo by Mary Healy

When side by side, the difference in stems is very apparent. The Christmas Cactus's stem has a much smoother, scalloped edge. The Thanksgiving Cactus's edges are sharper with two to three points per side.

Flowers

Aside from the blooming time, there is one other subtle difference to look for in your holiday cactus to determine if it's a Thanksgiving Cactus or a Christmas Cactus.

A Thanksgiving Cactus's pollen anthers, the small fine stems in the middle of the flower, are yellow in color.



A

Thanksgiving Cactus Photo by [Mustang Joe](#).



Christmas Cactus Photo by Mary Healy

Once you've identified what kind of cactus you have, you can better determine when it should be blooming. As with all houseplants, understanding the origin of the plant can help with care.

When we hear cactus, most of us think of dry arid regions with sand. However, holiday cacti are native to tropical South American rain forests. Holiday cacti make their homes in crevices between rocks, on tree trunks and branches, much like orchids. Because of their native environment, the needs of a holiday cactus can be counterintuitive. Caring for the plant and mimicking its natural environment can increase bloom production as well as the health of the plant.

Lighting

Because holiday cacti are understory rainforest plants, they prefer light shade to full sunlight year-round. Given their name and succulent-like appearance, many people assume holiday cacti need full bright light, which can actually damage the stem.

Once the year gets closer to the bloom season, photoperiod regulation can be used to increase bud production. Photoperiod refers to the plant's exposure to sunlight and darkness. Because holiday cacti bloom in the late fall and early winter, lighting is one of the factors the plants use to know when it's time to bloom.

To begin a photoperiod regulation, expose the plant to bright light for approximately eight to ten hours a day. The plant should be exposed from anywhere between 13 and 16 hours of darkness. The darkness must be uninterrupted, or bloom production could be affected.

You don't need to move your holiday cactus daily to regulate its photoperiod. Setting the cactus on a windowsill works perfectly well. However, be aware of the room that your plant is housed in. If it's a room that you regularly use and in which you keep lights on late into the night, then bloom production on the side of the cactus facing the room could be negatively affected.



Example of disrupted photoperiod. More blooms are on the side of the plant facing the window than the room. Photo by Mary Healy

Temperature

Even though holiday cacti are cacti, they don't tolerate extremely high temperatures, especially around bloom time. The change in season is an indicator to the plant that it's almost time to bloom. As such, holiday cacti need a lower temperature to help facilitate bloom.

A holiday cactus's stems grow during spring and summer months and tolerate temperatures between 70 and 80 degrees Fahrenheit. These plants can be placed outside. If outside, be sure to monitor how much direct sunlight the plants receive and their water intake.

During the fall and winter, holiday cacti can tolerate temperatures between 50 and 90 degrees Fahrenheit. At below 50 degrees, flower buds may begin to drop. If your holiday cactus is outside, move the plant indoors once temperatures begin to dip below 50 degrees. Similarly, 90 degrees will cause bud drop as well. If your cactus is kept in a greenhouse over the fall and winter months, be sure to monitor the interior temperature so that it does not reach above 90 degrees.

The ideal temperature for bloom is between 60 and 68 degrees Fahrenheit, with closer to 68 degrees being ideal. This is a little cooler than most of us keep our homes. To encourage bud growth, place the plant in a cooler room in your home or at least far away from any heat sources such as vents or fireplaces.

Typically meeting the plant's temperature and light requirements is enough to encourage a showy bloom for the Thanksgiving or Christmas season.

Water

Thanksgiving Cactus with buds developing.

Photo by Christina Schluter

Watering a holiday cactus is a fine balance between too little and too much. Due to their name, there may be an inclination to underwater the plant or to let the soil completely dry out between waterings. However, as tropical plants, holiday cacti are used to a level of dampness. Too much though can cause problems for the plant.

The holiday cactus's need for water changes with the season. In the spring and summer, it is tolerant of slightly under-watered conditions. To determine if the plant needs water, check the top two inches of the soil. When the first two inches are dry, the plant is ready to be watered.

In the fall and winter, the holiday cactus should be monitored more closely. Try to avoid under-watering and letting the soil completely dry. Check the top two inches of soil and if dry, then water. Ensure that the soil is evenly moistened to avoid overly wet or dry spots. Avoid the soil becoming waterlogged. A good part of avoiding

waterlogged soil is selection of appropriate soil.

Soil

Holiday cacti naturally grow in crevices where forest detritus collects, creating a rich, though shallow, growing medium for them. In selecting the soil for your holiday cactus, you want to approximate its natural growing medium as much as possible.

Select a rich organic potting mix, to make up about 60 to 80 percent of the potting mix. Be very careful if selecting a potting mix containing peat as the material holds on to water. A standard potting mix for house plants would work well.

For the remaining 40 to 20 percent of the soil, use perlite or similar material to ensure good aeration in the soil. This is crucial to keep the soil from becoming waterlogged. You can also mix in cacti potting mix with regular potting mix to achieve a similar medium.

Repotting and Propagating

Holiday cacti like to be slightly rootbound and need not be repotted every year. Repot holiday cacti about once every three years in the springtime and increase the pot size nominally, about two inches.

When repotting your holiday cacti, be sure to check the root structure. These plants have delicate roots that are susceptible to root rot. Repotting is the perfect time to check for signs

of root rot. More information on what to look for and what to do is in the Common Issues section below.

To propagate holiday cacti, pinch off a section of the stem with 3 to 5 segments or "leaves." Next, allow the cut end of the stem to callus over. Once the cuttings have callused over, plant three cuttings approximately one inch deep in a small potting container; 4 inches would work well. For soil, use a high percentage mix of potting soil to perlite. Water the soil well and then take a plastic bag, like a gallon sandwich bag, and place it over the top of the pot and secure with a rubber band. This creates a miniature greenhouse and provides the humidity needed to enhance the chance of the cuttings taking root. Place the pot in a location with bright indirect light. Roots take approximately three to eight weeks to form. Once roots have formed, the plastic bag can be removed, and a very dilute fertilizing solution can be used.

Common Issues

Because of their delicate root system, one of the most common issues with holiday cacti is root rot. This disease is characterized by black root tips or slimy blackish brownish roots and often a rotten smell in the soil or from the roots. If your plant's growth has severely slowed or the stems are wilting and yellowing, this could also be a sign of root rot. However, yellowing stems could also be a sign that the plant is receiving too much direct sunlight, so ensure that you have placed the plant out of direct sunlight before checking further for root rot signs.

If your holiday cactus does have root rot, then remove the plant from its pot and cut away the decaying roots. Rot is caused by a fungus and the remaining roots must be cleaned to remove any traces to keep the rot from taking hold. Once the roots have been cut and cleaned, place the plant on a paper towel and put it in a warm location with good airflow to allow the roots to dry overnight. Once dry, you can replant in growing medium. Allow the plant a couple days before watering.

Holiday cacti are wonderful plants with showy beautiful flowers that add a pop of color during the fall and winter seasons. With the right care, these plants bloom every year and can live for a very long time.

Rachel Healy, Loudoun County Extension Master Gardener

Spiders in Our Lives

Spiders are common and well-known animals occurring in a range of habitats from the peaks of the highest mountain ranges to the many corners of your home. Spiders are amazingly adaptive and are found in nearly every environment, be it natural or man-made, and in every corner of the world.

While spiders are found everywhere in varying habitats, they become restricted to the area where they are found. Spiders are specifically adapted to live in their specific habitats, so they tend to not stray too far from those habitats. If a spider is found outside its natural habitat, it might have accidentally hitched a ride on a human.

Spiders are not insects. All spiders are arachnids, belonging to the same group as scorpions, ticks, and mites. They have a skeleton on the outside of their body. They have two main body parts: a combined head and thorax and an abdomen.

The head of a spider has eyes and a mouth but no ears or nose. Most spiders have eight eyes in two rows of four. The head also contains the brain, the stomach and the poison glands.

The abdomen, the back part of the spider, contains the heart, lungs, silk glands, and reproductive organs. They have spinnerets at the end of their abdomens, which are used to spin silk. All spiders can make silk. They use it to make webs and traps, to wrap up prey, and to make burrows and cocoons. Spiders make up to seven kinds of silk, each used in a particular way. Silk is spun from the spinnerets and is used in the construction of webs, snares, shelters, and egg sacs. Spinnerets cannot be seen on many spiders

Spiders come in many different sizes and colors. The colors can act as camouflage or as a warning. There are two main types of spiders: web builders and hunting or wandering spiders. Web builders use their webs to trap flying insects. Hunting species wander along the ground and catch crawling insects.

About 40,000 species of spiders have been identified, although there are certainly more. Many types of spiders can be found in our area, some more common than others, and some more dangerous than others. However, spiders are ultimately helpful to have in the garden as they are natural predators of many pests.

One dangerous spider that can be found in our area is the black widow spider. The southern black widow spider (*Latrodectus mactans*) is the only poisonous spider native to Virginia. This distinct-looking spider is all black except for a red hourglass mark on the underside of the female's abdomen. The males tend to be lighter in color with smaller abdomens that might have red or pink markings. The females are larger than the males.

Black widow spiders create webs to trap prey, which includes insects and other spiders. They are mostly known to trap and consume flying and climbing insects, but every now and then small snakes or lizards become tangled in their webs and are eaten. Once the prey is tangled in the web, the black widow paralyzes it with a venomous bite. The venom paralyzes the prey, allowing the black widow to consume it.



Female Black Widow Spider Photo
Elizabeth Cornell Flake, [Fairfax Gardening](#)

This venom is also harmful to humans. Because they are larger, the female black widow's bite is more painful and stronger. However, if bitten by a black widow, it is best to seek medical help. There is an antivenom that can provide relief. Even still, it's a good idea to be on the lookout for these spiders when working in the garden.

If you've ever had a classic spider web appear overnight in your door or window, there's a pretty good chance it was the work of an orb-weaver spider. These common spiders get their name from the type of web they spin--circular with spokes. Interestingly, male orb-weavers stop spinning webs once they reach maturity and search for a female to mate with.



Black and Yellow Orb-Weaver

Photo Judy Gallagher, [Flickr](#)

There are many types of orb-weavers that vary in size, color, and habitat. They can be found in weedy, meadow-like locations, in forests, along bodies of water, and at tree lines. In fact, they are very commonly found in gardens. Like the black widow, these spiders use their distinct webs to trap prey to consume. They tend to have poor eyesight and rely on vibrations along the silk strand of their web to orient where prey has landed.

Because spiders trap and consume insects, they are very beneficial to a gardener. They can eat pests before they become a problem and ruin a crop or planting. Spiders also provide a source of food for many of our native bird species.

Though many people have a fear of spiders, they are a fascinating, varied group that do a lot of good for the native environments they are a part of. Next time you see one in your home, thank that spider for catching any wayward insects and then carefully toss it out the door instead of killing it!

Heather Keith Swanson, Loudoun County Extension Master Gardener

Lima Beans From Seed to Soup

HISTORY

Lima beans (*Phaseolus lunatus*) originated in Peru. Scientists have been able to trace remains of lima bean plants to 6000-5000 BCE, making lima beans one of the oldest beans in the Americas. During the 16th century, Peru was invaded by Spain. The Spaniards saw a great value in lima beans, and they started shipping them to North America and Europe. The boxes were stamped with their point of origin—Lima, Peru. That's how the bean became known as the lima bean. Lima beans are known by different names and they come in many shapes, sizes, and colors. There's the "Madagascar" bean, which grows in hot and humid areas; it has a white base color with purple speckles. "Double" beans are popular in Indian recipes, and "butter" beans are named for their buttery flavor. Butter beans are considered a traditional southern dish (especially when combined with corn for succotash) and are especially popular in North and South Carolina. Did you know that butter beans were a summer favorite of Thomas Jefferson?

I'm sure I'm not the only kid who didn't like lima beans. But when I went away to Longwood College, they served lima beans at dinner one night. (Back in the Dark Ages when I went to college, dinner was "family" style—you ate dinner around a large round table with 7 other young women.) The lima beans weren't my mom's hard, undercooked lima beans—not at all! These beans had been cooked to within an inch of their life—they were soft and creamy and the water they were cooked in had thickened into a lovely broth. They were so good. That was about 50 years ago and I've loved lima beans ever since dinner that night at Longwood College. Fresh local lima beans are hard to find these days. The only vendor in this area that I know about is Brossman's farm stand on Rt. 15 in Lucketts. They have a pretty good supply of lima beans from mid-August to mid-September. They go fast though, so get there early! This year they even had a waiting list!

WHAT ARE LIMA BEANS?



Bean sizes

Lima beans are herbaceous plants in the legume family. They are a summer vegetable, high in protein, thiamine, riboflavin, and iron. The blossoms are usually white (but can be yellow), and the leaves are trifoliate oval leaves, about 2 to 3 inches long. Seed color varies—white, pale green, brown, black, red, and speckled. The pods have a curved, flat look and range in length from 3 to 8 inches. Seed size ranges from small to fairly large. Lima beans have been described as having a "buttery, meaty texture." You can cook and eat them freshly picked from the garden or freeze or dry them to enjoy later.

GROWING LIMA BEANS

Since lima beans were so hard to find locally, about 5 or 6 years ago I decided to grow my own. I thought, how hard can it be? And, guess what—it wasn't hard at all. I can grow enough beans in my 8- by 10-foot backyard garden for two to three nice harvests of beans in late August and early September.

Lima beans grow best in a temperature range of 70 to 80 degrees F. Temperatures consistently below 70 degrees F will inhibit bean development inside the pod. The plants need full sun (6 to 8 hours a day) and a loamy, moist, well-drained soil. At last check, Brossman's grows their lima

beans in the sandy soil alongside the Potomac River. You can still see some sand on the pods when you buy them.

Lima beans have two growing styles—bush beans and pole (or vining) beans. Both kinds of plants need support and should be trained to climb a trellis to keep them off the ground. Bush beans mature faster than pole beans but are more susceptible to diseases and pests. Varieties of bush lima beans are Henderson, Fordhook 242 (both of which I have grown successfully), and Dixie Butterpea. Pole lima beans can reach a height of 10 to 12 feet and take an additional month to mature. Pole beans are also called potato lima beans, Madagascar beans, or Burma beans. Varieties include Christmas and Big Mama.

PREPARE THE GARDEN. Lima beans need a lot of sun so choose a sunny spot in your garden that gets at least 6 to 8 hours of direct sunlight per day. Although the plants can grow in less light, they will produce fewer pods. Clean out all the old roots, rocks, and other detritus from the garden. Amend the soil as needed with compost and organic fertilizer. Lima bean seeds should be planted directly in the ground or in raised beds or containers. It is not necessary to start the seeds indoors. The plants need well-draining, fertile soil with an ideal pH range between 6.0 and 6.8. They grow best when the soil temperature is at least 65 degrees F and the air temperature is between 65 and 80 degrees F.

BUY THE SEEDS. Decide if you want to grow bush or pole beans. I've only grown bush beans and so far have had great luck growing them. I buy my seeds early, in January or February, because some seeds tend to sell out quickly. Most of the major seed companies have several varieties of lima bean seeds to choose from.

PLANT THE SEEDS. Lay out your garden so that you get the maximum number of rows. Set up the trellises first. Make sure they are securely in the ground because the lima bean plants will get heavy and need a lot of support as they mature. I secure my trellises to wooden stakes and use earth staples across the bottom. If I don't grow anything else, I can fit 6 rows of lima bean plants in my 8- by 10-foot garden area—three trellises across the width of the garden with a row of plants on either side of each trellis. Remember to leave room for a couple of walkways to access the plants for watering, weeding, and harvesting. You can start the seeds inside under grow lights, but it is not recommended for this area—just plant the seeds directly into the garden about a week or two after the risk of frost has passed—usually mid-to-late May for this area. The soil temperature should be 75 degrees for optimum results. If the soil is cold or wet for a long period of time, the seeds can rot in the ground. Once the trellises are in place, plant the seeds about 1 to 1.5 inches deep and 2 to 4 inches apart. Bush beans also grow great in containers. Make sure the container has a drainage hole and it should be large enough to hold at least 10 gallons of soil. Plant the seeds 1 inch deep and 4 to 6 inches apart in containers. If you're growing pole beans, be sure to establish your support system (trellis, chain link fence, or a pole bean teepee) before the seedlings sprout so you don't damage them later installing it. Plant the seeds 1 to 1.5 inches deep and 6 inches apart. Both types of seeds take 7 to 18 days to germinate. Once the seeds have sprouted, thin the seedlings to about 4 inches apart. They do not need additional nitrogen. Cover the seedlings with a thin layer of straw. Lima beans typically reach maturity 65 to 95



My garden 2022. Six rows of lima beans just sprouting

days after planting.

SHOULD YOU USE AN INOCULANT? Both bush and pole beans will benefit from legume inoculants. They contain naturally occurring *Rhizobia* bacteria, which helps to fix nitrogen in the soil. To apply an inoculant, put the seeds in a container, lightly wet them with water, and sprinkle the inoculant on the seeds. Shake gently to evenly distribute the inoculants and plant the seeds right away.

MAINTAIN THE GARDEN. Lima bean plants are low maintenance and do not need a lot of attention during the growing season. Basically, there are four things you need to do—water, weed, fertilize, and monitor for bugs and diseases.

Watering--Lima beans like a lightly moist soil so if you've had no rain in the last week, you should water everything deeply (1 inch).

Weeding and Mulching--Surround the seedlings with a light layer of straw to hold in the soil moisture and help slow down the growth of weeds. When weeds do make an appearance, pull them up right away so your plants aren't competing with the weeds for sunlight, water, and fertilizer.

Fertilizing--Lima beans do just fine in a moderately fertile soil, but since they are growing in the garden for 3 to 4 months, it's a good idea to give them a little fertilizer mid-season.

Monitoring for Pests and Diseases--If you're like me, you walk around your garden and yard every day. When you do, keep an eye out for diseases or bugs on all your vegetable plants. Diseases common to lima bean plants include bacterial blight, mosaic virus, and anthracnose. Pests include aphids, bean beetles, flea beetles, spider mites, rabbits, and deer. Control diseases and pests by cleaning out your garden at the end of each growing season and getting rid of compromised plants so they don't become an opportunity for diseases or insects and their eggs to overwinter. Plants that are not infected or compromised can be put right in your compost bin. Last year I had an infestation of ants on my lima bean plants. They would chew through the pods and ruin the beans inside. I ended up having to pull up the plants sooner than I would have liked. And toward the end of the growing season, I almost always get common bean blight and/or bean mosaic virus on the leaves. Both spread quickly and can attack both lima and snap beans.

IT'S HARVEST TIME!!



The day is FINALLY here when the pods are full enough to harvest. How will you know when the beans are ready to be harvested? Well, the "days to maturity" information on the seed packet gives you a ballpark estimate of when they might be ready. Mature pods will be 4 to 8 inches long, depending on the bean variety, and should contain 3 to 5 seeds per pod. When they are ready to be picked, the pods will look and feel firm and full and should come off the vine easily. Some of the pods may look unusable on the outside. Shell them anyway; the beans inside the pods are most likely perfectly fine.

THE BEST PART--EATING YOUR HARVEST

You planted your seeds, you watered and fertilized and kept them safe from bugs and diseases. You trained those plants to grow up a trellis and you checked every single day to see if any of the

Pods were ready to pick. You babied those plants every step of the way and AT LAST you are ready to cook (and eat!) your first lima beans of the season. There are a couple of ways to enjoy them.

Just limas--Shell the beans, put them in a pot of water, add a little salt and pepper, and soft boil them for about 45 minutes until they are soft. Serve with a dollop of butter.

Succotash--Cook the beans for about 45 minutes until they are soft. Remove the beans from the heat (but don't drain). Cut the kernels off of at least 3 to 4 fresh ears of corn and add the corn to the pot. (If you don't have fresh corn, frozen corn will work.) How much corn you add is up to you. I like a lot of corn in my succotash. Add a little water to the pot if necessary and return the pot of beans and corn to the stove. Bring to a boil again and then remove the pot from the heat, stir, and serve. Your beans will be soft, and your corn will be crisp and your succotash will be perfect. You can also add other veggies to the succotash, such as red pepper, onion, and whatever you want to add.

Soup--I've included two lima bean soup recipes below for you to try. My Potato-Lima Bean Soup is one of my "make it up as you go along" soups. Basically, it's my grandmother's potato soup with lima beans added. (The soup is a good way to use leftover succotash.) There is also a recipe for "Love Me Lima Bean Soup," which I found on the Internet and tried. It's also very good and is perfect for a cold winter night's dinner.

Fresh lima beans will last for up to two weeks in the fridge. And if you have too many beans for your family to eat and your friends and neighbors don't want any (because how many people do you know who actually like lima beans), you can freeze them. They will last 3 to 6 months in the freezer. Freezing instructions are below. For long-term storage, shell and dry the beans and then store in a cool, dry, airtight container. They'll last for 8 to 10 months. You'll be eating last year's limas when you're growing this year's crop!

FUN AND INTERESTING FACTS ABOUT LIMA BEANS

One hectare (about 2.5 acres) of lima bean plants produces 6,400 to 11,000 pounds of beans each year.

The average person in the United States consumes 0.3 pounds of lima beans a year.

Lima beans are high in fiber and can help regulate blood sugar levels, reduce blood cholesterol levels, and keep your intestinal system moving along. One 6-ounce cup of cooked lima beans contains about 209 calories, 1.41 ounces of carbohydrates, and a small amount of fat. The same serving also contains protein, fiber, copper manganese, iron, magnesium, potassium, phosphorus, thiamin, and Vitamins B6 and C. Copper and Vitamin C can help boost your immune system.

And here's a surprising, little-known fact: lima beans are actually perennials with a lifespan of more than two years, but they are almost always grown as annuals in this region.

The plant produces small white or yellowish flowers with both types of reproductive organs (a perfect flower). The flowers produce a lot of nectar, which attracts honeybees—the main pollinators of lima bean plants. No bees around? The plants will self-pollinate.

Although they are still very popular in the United States, due to regulations and small crops it's hard to find fresh lima beans anywhere, not just in this area. Recent surveys show that people are consuming fewer lima beans than in the past five years. Obviously, I am not in this group. ☺

West Cape May, New Jersey, self-named itself the "Lima Bean Capital of the World" in the mid-1980s. That's also around the time when the annual Lima Bean Festival began in West Cape May. By 1992, however, there were only four lima bean farms left in New Jersey and currently there are no lima bean farms in New Jersey. But they still have the festival every year. If you love lima beans, you should definitely check it out. They have lima bean soup, ice cream, salsa, stews, tee shirts, hats, a lima bean Queen, and what seems like lima bean everything. It's quite popular, though, so be sure to make advance arrangements for accommodations if you go.

In 1983, the pop group the B-52s included the song "Butterbean" on their album, "Whammy."

Lima bean extract can be used to type blood. It's very accurate in identifying Type A by agglutination—the clumping of blood when the blood and bean extract are combined. Of course, lima bean extract is not widely used to type blood but it shows how versatile lima beans are when it comes to human health.

Linamarin is a compound found in the leaves and roots of the lima bean plant. When it is ingested, linamarin breaks down into hydrogen cyanide. It takes 150 to 200 mg of cyanide to kill a human being. Uncooked lima beans contain 3,000 to 4,000 mg of linamarin per kilogram. Two pounds of uncooked lima beans can kill up to 20 people. However, cooking lima beans for at least 10 minutes reduces the linamarin content to a safe level. So be sure to cook your succotash thoroughly for your next dinner party!

HOW TO FREEZE LIMA BEANS

Freezing lima beans is easy. Bring one gallon of water to a rolling boil. Add one pound of beans and return water to a boil. Cook small beans for two minutes, medium beans for three minutes, and large beans for four minutes. Begin timing as soon as you put the beans in the boiling water. Drain. Pour into a bowl filled with icy water and cool for the same amount of time that you boiled. Drain again. Put in resealable freezer bags. Leave about half an inch of space in the bag to allow for expansion as they freeze. The beans will last for 3 to 6 months.

JAYNE'S POTATO LIMA BEAN SOUP (Makes about 6 servings)
(VEGETARIAN AND DAIRY FREE WITHOUT THE CHEESE GARNISH)

4 to 6 medium-to-large redskin or white potatoes, diced

2 stalks of celery, sliced

1 large, sweet onion, chopped

Lots of carrots (my husband loves carrots), cut into small to medium pieces

Fresh or frozen lima beans, shelled

Fresh or frozen corn, removed from the cob (how much corn and beans you use is up to you.)

One 32-ounce carton of low sodium chicken broth. (You may have to add a little water as well.)

Barley, 2 to 3 handfuls

Salt and pepper to taste

Garnish with fresh parsley, bacon bits, and/or Colby Jack shredded cheese



This is a good soup for using up leftover lima beans or succotash.

Combine the vegetables, potatoes, lima beans, barley, and seasonings together in a large pot. Add the chicken broth (and water if necessary). Season with salt and pepper. Bring the soup to a boil, stirring occasionally, and cook for 45 to 60 minutes. Remove the pot from the burner and lightly mash the vegetables and potatoes in the pot 6 or 7 times with a potato masher. This helps to thicken the soup. Add the corn and bring to another boil. When the soup boils, turn off the heat and let the pot sit on the burner for about 15 minutes, and then serve. After you put the soup in the bowls, garnish with a little chopped parsley. I also sprinkle a little 2-percent Colby-Jack cheese on my soup, and my husband likes to add bacon bits to his. Enjoy!

LOVE ME LIMA BEAN SOUP (Makes about 4 servings)

Courtesy of "Farm Fresh to You"

1 cup dried lima beans, soaked overnight
1 tbsp olive oil
1 tbsp butter
2 celery stalks, cut into pieces
2 carrots, chopped
1 onion, chopped
1 clove garlic, minced
4 cups vegetable or chicken broth (I use low sodium)
1 tbsp Dijon mustard
1 tsp fresh thyme leaves removed from stems

Soak the lima beans overnight in a small pot with four to five cups of water. Drain. In a large pot, heat the oil and butter over medium heat. Sauté the celery, carrots and onion until softened--about 5 minutes. Add garlic and sauté about 30 seconds. Add broth, mustard, thyme leaves, and salt and pepper to taste and stir. Add the lima beans and bring to a boil. Reduce heat to a simmer and cook until the beans are softened, about 25 to 40 minutes. Serve with bread for dipping.

So, go ahead, live life on the edge—try something new. Give lima beans a try, they're GOOD for you! And.....you might just like them!

Jayne Collins, Loudoun County Extension Master Gardener

All photos by Jayne Collins

Veggie Winter Dreaming - Vegetable Garden Resources for a Winter's Day

Chilling winds and darker days might keep us out of our gardens, but winter can be a great time to dream up your best vegetable garden ever. Curl up with a nice cup of tea and explore these resources, draft some plans and be ready to plant at the first signs of spring.

If you've never grown a vegetable garden, or are new to vegetable gardening, following these tips will help you plan for a successful harvest. Before getting started, it's best to make several important decisions that will guide your planning.

Where to Place a Vegetable Garden

To grow well, your vegetable garden will require 8 hours of sunlight daily, and a convenient water source. Planting in shaded spots may lead to stunted or little growth, plant diseases, and frustration for the gardener. Avoid areas shaded by trees or buildings, low or overly damp areas, and windy locations. [This publication](#) has additional information on where to place a vegetable garden.

What to Grow?

Seed catalogues can offer a huge variety of alternatives, but the most important thing to consider is what you and your family actually like to eat. Japanese eggplant may look enticing in the catalogue, but unless your family enjoys eating it (as mine does) you will want to allocate valuable garden space to foods that will be eagerly consumed.

Another thing to consider is the length of time each plant takes to produce and the size of the plant. Gardeners with small vegetable plots may prefer to grow a series of faster maturing more compact vegetables such as radishes, lettuces, or bok-choy for example instead of pumpkins or butternut squash which take much longer to grow and occupy a significant amount of garden space.

When to Plant and How Much to Grow?

Virginia Cooperative Extension [Home Vegetable Gardening](#) website provides a wealth of resources for the home gardener. The [Virginia's Home Gardening Planting Guide](#) includes information on when to plant different vegetables (seeds or seedlings), and how much to plant based on the number of household members. The website shares videos, articles, and links. A final consideration would be how much time you are able to devote to the garden.

Beginning vegetable gardeners will want to pay close attention to recommended planting dates as some plants will perform better in cooler weather, while others can continue growing into the heat of summer. Planting the right plant in the best window of time will yield more produce, lead to less frustration, and allow for succession planting.

What Will Grow Best in Your Garden?

Knowing what will grow well begins with knowing about your soil. Ideal soil will be loose, well-drained, and contain organic matter. A soil test will help identify any deficiencies and provide recommendations for improving the soil.

Follow the guidelines in the [Home Garden Planting Guide](#) to ensure you are planting the correct seeds at the correct time as some vegetables prefer cooler temperatures, while others thrive in the heat of summer.

Which are Better, Seeds or Seedlings?

Seedlings are available seasonally from local farmers markets, hardware stores, nurseries, and garden centers as single plants or multi-packs. Most seedlings are best planted young to avoid root-shock, so larger, more expensive plants may not be the best option. Since they are less tender than sprouting seeds, they are more resistant to damage from insects or weather. Another advantage of seedlings is that they are already several weeks into their growing season, so may produce more quickly than seeds planted directly in the garden. This is often the easiest and most rewarding method for beginning gardeners. Two disadvantages of seedlings are that they are much more



Grow lights Photo by F. Berghorson

expensive than growing from seed, and there may be fewer options or varieties available.

Sowing your own seeds can be more economical than planting purchased seedlings, and seeds once purchased can be stored for use in future years (germination rates may decline, and seeds will vary in the length of time they may be stored). Follow the instructions on the packets and use the [Home Garden Planting Guide](#) to determine appropriate dates for sowing. Check your planting regularly and nip any insect problems in the bud to avoid insect damage when sprouts are especially vulnerable.

Growing your own seedlings can be both economical and avoid disease acquired at a nursery. This [Virginia Extension Office website](#) provides detailed information on starting seeds indoors. This may be done on a sunny windowsill or in a specialized growing area. As with the outdoor garden, light is one of the most essential ingredients, as a lack of light will produce weak, leggy (overly tall) seedlings. Many home gardeners invest in grow lights to provide extra light when the days are short.

Where to Get Seeds

Seeds can be purchased from major suppliers like [Burpee](#), [Johnny's Selected Seed Company](#), or [Ferry-Morse](#) through their catalogues or at local stores (Home Depot, Lowes, Walmart), and these companies are offering more alternative varieties each year. While for the budget conscious, American Seed (from the Dollar Store) offers a decent selection of common varieties in smaller quantities at bargain pricing.

If you would like to grow more unusual varieties, there are many seed companies that specialize in unique and heirloom varieties. While most seed suppliers have extensive online catalogues, nothing quite compares to turning the pages of a favorite seed company's catalogue. If you've ordered seeds in the past, you've likely already received a good number of catalogues, but if not, it's easy to request a paper copy from most company's websites. Once you've made your selections though, you will get a faster response by ordering online than by mailing in an order form.

Below is a list of some of my favorite resources (please note that this is not an endorsement from any official agency, merely a sharing of my own experience). Many of the companies below also contribute to important gardening and educational causes.

[Baker Creek](#) proudly states that their mission is to provide seeds of a sustainable food supply for everyone, keeping heirloom varieties alive for future generations. North America's largest heirloom seed company also They specialize in heirloom varieties and offer both organic and conventionally grown seeds. Baker Creek also organizes multiple garden related events and expos, contributes to emergency charities, and provides free seeds and training for hundreds of educational groups each year.

[Everwilde Farms Inc.](#) sells non-gmo and organic seeds in resealable seed packets that keep seeds protected and viable. Each packet includes information on the germination rate, and if lower, extra seed is included. A small, family-owned company, they specialize in wildflowers and a wide variety of unusual vegetables. Seeds are sold in packets of different weights.

[High Mowing Seeds](#) offers a large selection of all organic seeds. Deeply devoted to organic gardening, they advocate for a variety of issues around access to seeds and environmental preservation. They also provide donations to local organizations dealing with food insecurity and have an extensive education outreach program.

[Pinetree Garden Seeds](#) started with the mission of providing low-cost seeds for the home gardener. A supporter of sustainable agriculture, Pinetree does not sell any GMO seeds. The catalogue has a wide selection of vegetables, plants, cookbooks, garden tools and more.

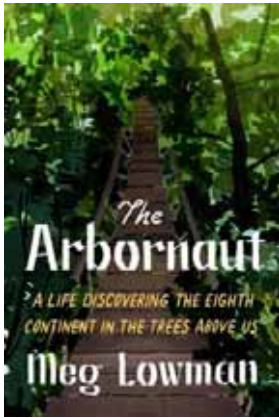
[Seeds of Change](#) was one of the first widely available source of non-GMO and organic seeds. Now owned by MARS (the 4th largest privately held food company in the US), these seeds are widely available as an organic alternative at local venues.

[Seed Savers Exchange](#) has carefully collected, propagated and preserved rare heirloom varieties and currently has the nation's largest non-governmental seed bank. They sell a wide variety of seeds and also facilitate the exchange of seeds through their website.

Whichever catalogue tickles your fancy, you're sure to find some old favorites and new varieties to try.

Freyja Bergthorson, Loudoun County Extension Master Gardener

Book Review *The Arbornaut* by Meg Lowman



Release date August 2021,
327 pages.

Meg Lowman loved being outdoors as a child. There she collected flowers, pine cones, and bird eggs. In 1964, at the age of 10, she won second prize in the New York State Science Fair for her collection of pressed and dried wildflowers. She continued her explorations of the environment and found a wonderful summer camp in Capon Bridge, West Virginia, where she met other kids who shared her passion for the outdoors. She attended that camp for six summers as a camper and then as a counselor. She then chose to attend Williams College because it had a forest on its campus, and she decided to make the study of trees her lifelong passion. After a year at Duke University's forestry school, she transferred to the University of Aberdeen, Scotland, where she studied ecology in the cloudy Scottish Highlands. Meg then relocated to Australia to get her Ph.D. because the University of Sydney offered her a scholarship. Looking at trees from the ground was like studying a body by looking at a big toe. She realized that to really understand trees

you had to get up in their crowns. Using a strong slingshot to shoot a rope around a high tree branch and mountain climbing equipment, she was able to go up in the crowns of trees and study the plants and animals living there. She found thousands of species of beetles and epiphytes (plants that grow on other plants but are not parasites) that had never been found before.

After getting her Ph.D., Meg married an Australian sheep farmer and moved to his 5,000-acre "station" where he and his father raised sheep. Meg investigated why so many eucalypt trees, a common tree in Australia, were dying. It was believed that it was due to koalas eating their leaves, but she found it was due to insect predation--some trees had their leaves completely eaten three times in a season. Meg wanted to continue her research activities while running her home and raising two boys, but pressures from her in-laws made it just too difficult. When she got an offer from Williams College to be a visiting professor, she moved with her sons back to Massachusetts. Her career has included teaching, setting up new programs at North Carolina Museum of Science and Marie Selby Botanical Garden in Sarasota, Florida, and working all over the world to preserve forests and educate people on the importance of forests. She has worked on projects to build canopy walkways in Asia, the United States, and Australia so that people can experience what is going on there. Meg has mentored many young women and men in the fields of botany and ecology.

This book is written very clearly without being technical and dry, and it goes into detail about how a botanist conducts field research. At the end of each chapter is a section describing an important tree species; the trees of Australia, Africa, and Asia are very different from our native trees. There is a very helpful glossary of botanical terms. Meg concludes her book describing how trees are necessary for our planet for oxygen, erosion control, fresh water, wildlife, storage of carbon, and many other benefits. While the statistics on forest loss are alarming, we can still do many things to educate people on the importance of forests, how to prevent their destruction, and how to establish new forests.

Betty Hedges, Loudoun County Extension Master Gardener